STRONTIUM STATISTICS

By Thomas D. Kelly and Joyce A. Ober

[All values in metric tons (t) unless otherwise noted]

Year	Production	Shipments	Imports	Exports	Stocks	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1916	100					100			
1917	1,610		677			2,280	34.0	436	
1918	160		1,170			1,320	2.00	25.0	
1919	0		885			885	40.0	374	
1920	0		1,240			1,240	35.0	282	
1921	0		1,120			1,120	14.0	122	
1922	0		992			992	11.0	109	
1923	0		1,030			1,030	127	1,210	
1924	0					954	150	1,429	
1925	0		877			877	173	1,610	
1926	0		877			877	173	1,590	
1927	0		877			877	173	1,620	
1928	0		877			877	173	1,650	
1929	0		877			877	173	1,650	
1930	0		412			412	254	2,490	
1931	0		331			331	253	2,710	
1932	0		93.0			93.0	228	2,720	
1933	0		586			586	57.0	712	
1934	0		551			551	49.0	592	
1935	0		585			585	51.0	603	
1936	0		917			917	66.0	775	
1937	0		1,250			1,250	53.0	598	
1938	0		201			201	176	2,030	
1939	0		1,220			1,220	48.0	558	
1940	933		1,100			2,030	26.0	305	
1941	1,880		1,710			3,590	39.0	429	
1942	1,610		4,140			5,740	35.0	352	
1943	3,010		6,720			9,730	37.0	350	
1944	1,200		2,310			3,500	38.0	347	
1945	1,110		1,470			2,580	34.0	313	
1946	97.0		1,790			1,890	37.0	307	
1947	0		5,620			5,620	43.0	315	
1948	0		8,670			8,670	65.0	436	
1949	0		3,740			3,740	47.0	324	
1950	0		3,440			3,440	41.0	280	
1951	0		5,590			5,590	55.0	343	19,100
1952	0		3,790			3,790	49.0	302	9,950
1953	20.0		2,750			2,770	45.0	275	6,140
1954	5.00		1,310			1,310	41.0	247	4,230
1955	71.0		2,440			2,510	53.0	321	7,380
1956	1,610		3,760			5,370	51.0	307	16,100
1957			2,600			2,600	50.0	291	11,800
1958			2,680			2,680	53.0	302	10,100
1959			3,240			3,240	70.0	389	9,710
1960	0		2,460			2,460	61.0	334	11,500
1961	0		3,950			3,950	62.0	336	12,600
1962	0		2,980			2,980	63.0	341	11,700
1963	0		6,460			6,460	58.0	306	17,000
1964	0		8,610			8,610	59.0	310	23,800
1965	0		3,880			3,880	57.0	294	14,000
1966	0		4,590			4,590	58.0	293	16,700

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1967	0	2,050	2,230		15,600	4,640	55.0	269	10,400
1968	0	1,870	5,130		13,700	6,060	60.0	279	12,800
1969	0	1,430	11,100		12,300	14,400	54.00	239.0	47,000
1970	0	1,340	14,800		10,900	17,300	56.00	234.0	59,900
1971	0		18,200		10,900	18,100	64.00	258.0	112,000
1972	0		12,500		10,900	13,400	84.00	327.0	100,000
1973	0	7,270	13,900		3,680	14,100	171.0	629.0	93,300
1974	0	3,680	19,800			13,600	214.0	706.0	98,400
1975	0		10,200			12,200	204.0	618.0	53,100
1976	0		17,000			15,100	225.0	644.0	69,400
1977	0		18,000			18,000	163.0	439.0	95,300
1978	0		18,600			18,500	216.0	539.0	92,600
1979	0		20,400			20,700	257.0	578.0	95,800
1980	0		16,900			16,400	259.0	512.0	95,000
1981	0		22,100			17,400	314.0	563.0	125,000
1982	0		14,100			15,100	276.0	466.0	139,000
1983	0		20,300			20,600	237.0	388.0	152,000
1984	0		21,800			21,800	352.0	553.0	140,000
1985	0		18,600	21.0		18,600	483.0	732.0	163,000
1986	0		17,500	808		16,700	528.0	785.0	153,000
1987	0		22,000	1,880		20,200	495.0	711.0	183,000
1988	0		25,900	3,150		22,700	493.0	680.0	226,000
1989	0		22,500	1,310		21,200	579.0	762.0	275,000
1990	0		33,000	1,720		31,300	520.0	648.0	240,000
1991	0		24,100	1,070		23,000	555.0	664.0	199,000
1992	0		32,600	741		31,900	518.0	602.0	195,000
1993	0		26,900	260		26,700	658.0	742.0	201,000
1994	0		35,300	1,130		34,900	559.0	615.0	274,000
1995	0		33,500	1,050		32,300	700.0	749.0	311,000
1996	0		32,000	1,050		31,400	717.0	745.0	306,000
1997	0		38,600	852		37,900	781.0	793.0	294,000
1998	0		35,200	854		34,700	773.0	773.0	276,000

Strontium Worksheet Notes

Data Sources
The sources of data for the strontium worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR); and Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS). The years of publication and corresponding years of data coverage are listed in the References section below. Blank cells in the worksheet indicate that data either were not available or were withheld from publication because they are proprietary.

Production
Production data for the years 1916–98 were recorded from the MR and the MYB. Production data for the years 1916–98 represent the strontium content in strontium minerals, such as celestite, that were produced from domestic mines. Production data for the years 1957–59 were withheld because they are proprietary.

Shipments
Shipment data for the years 1967–74 were recorded from the MYB. Shipment data for the years 1967–74 represent the quantities of stockpile-grade celestite that were shipped annually from the National Defense Stockpile to domestic recipients.

Imports
Import data for the years 1917–98 were recorded from the MR and the MYB. For the year 1924, import data were not available. Import data for the years 1917–98 represent the strontium content in imported strontium minerals, such as celestite, and imported strontium compounds, such as strontium carbonate, strontium chromate, strontium nitrate, strontium oxalate, and strontium sulfate. Import data for the years 1917–98 also include imports of strontium metal.

Exports
Export data for the years 1985–98 were recorded from the MYB. Export data for the years 1985–98 represent the strontium content in various strontium compounds, such as strontium carbonate, strontium hydroxide, strontium oxide, and strontium peroxide, that were exported from the United States.

Stocks
Stock data for the years 1967–73 were recorded from the MYB. Stock data for the years 1967–73 represent the quantities of stockpile-grade celestite that were held annually within the National Defense Stockpile.

Apparent Consumption
Apparent consumption statistics from 1967–83 and from 1994–98 were recorded from the CDS and the MCS. Apparent consumption statistics from 1916–66 and from 1984–93 were estimated as being equal to production plus imports minus exports. Apparent consumption statistics for the year 1924 were interpolated from the apparent consumption data series because strontium materials were not produced domestically and import and export data were not available.

Unit Value ($/t)
Unit value is defined as the value of 1 metric ton (t) of strontium apparent consumption. Unit value data for the years 1917–98 were estimated as the average value per metric ton of strontium in strontium carbonate, chromate, metal, minerals, nitrate, salts, sulfate, and other unspecified compounds that were imported into the United States for consumption purposes. For the year 1924, unit value statistics were interpolated from the unit value data series because import data for 1924 were not available. Unit value data for strontium carbonate, chromate, metal, minerals, nitrate, and sulfate were estimated on a strontium content basis. Unit value for strontium salts and other unspecified compounds were estimated on a gross weight basis. Some unit value fluctuations in the unit value series are not necessarily indicative of changes in value but, rather, may reflect variations in the completeness of reporting in the MYB on a year-to-year basis.

Unit Value (98$/t)
Unit value is estimated in terms of constant 1998 dollars by dividing the Consumer Price Index conversion factors, with 1998 as the base year, into the unit value data.

World Production
World production data for the years 1951–98 were recorded from the MYB. World production data for the years 1951–98 represent the total quantity of celestite that was produced annually throughout the world.

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